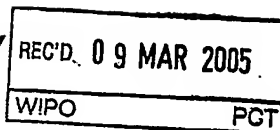


# PATENT COOPERATION TREATY

## PCT

### INTERNATIONAL PRELIMINARY EXAMINATION REPORT (PCT Article 36 and Rule 70)





Applicant's or agent's file reference 62619A	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA/416)	
International application No. PCT/US 03/6483	International filing date (day/month/year) 17.11.2003	Priority date (day/month/year) 13.12.2002
International Patent Classification (IPC) or both national classification and IPC C08F10/00		
Applicant DOW GLOBAL TECHNOLOGIES INC.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 5 sheets, including this cover sheet.
  - ☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of      sheets.

3. This report contains indications relating to the following items:
  - I ☒ Basis of the opinion
  - II ☐ Priority
  - III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
  - IV ☐ Lack of unity of invention
  - V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
  - VI ☐ Certain documents cited
  - VII ☐ Certain defects in the international application
  - VIII ☐ Certain observations on the international application

Date of submission of the demand  04.06.2004	Date of completion of this report  10.03.2005
Name and mailing address of the international preliminary examining authority:   European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tlx 31 651 epo nl Fax: +31 70 340 - 3016	Authorized Officer  Fischer, B  Telephone No. +31 70 340-3769  

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/US 03/36483

**I. Basis of the report**

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

**Description, Pages**

1-26 as originally filed

**Claims, Numbers**

1-8 as originally filed

**Drawings, Figures**

1 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).  
☐ the language of publication of the international application (under Rule 48.3(b)).  
☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.  
☐ filed together with the international application in computer readable form.  
☐ furnished subsequently to this Authority in written form.  
☐ furnished subsequently to this Authority in computer readable form.  
☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.  
☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:  
☐ the claims, Nos.:  
☐ the drawings, sheets:

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. **PCT/US 03/36483**

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

**1. Statement**

Novelty (N)	Yes: Claims	1-8
	No: Claims	
Inventive step (IS)	Yes: Claims	2,3,5
	No: Claims	1,4,6-8
Industrial applicability (IA)	Yes: Claims	1-8
	No: Claims	

**2. Citations and explanations**

**see separate sheet**

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

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**Re Item V**

**Reasoned statement with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement**

Reference is made to the following documents:

D1: EP-A-0 653 443 (SOLVAY) 17 May 1995 (1995-05-17)

D2: WO 96/15161 A (DSM NV ; RENKEMA JACOB (NL); MUSKENS BERNARDUS  
JOHANNA (NL)) 23 May 1996 (1996-05-23)

1. The document D1 is regarded as being the closest prior art to the subject-matter of claim 1, and shows on page 2, line 29 to page 3, line 5, catalyst compositions comprising a) a solid based on  $\text{TiCl}_3$  and b) a cocatalyst comprising an organoaluminum compound and an aminoalane of formula  $(\text{AlR}_2)_{3-x}\text{NR}'_x$  (1)

where  $0 \leq x < 3$  and preferably  $1 \leq x \leq 2$

In examples 6-8, mixtures of TEAL and several amines in a molar ratio of 2:1 are used to prepare the cocatalyst.

The subject-matter of claim 1 differs from this known D1 in that Group13 metal compound c) does not fall under the formula (1).

Document D2, discloses (cf page 2, lines 7-30) catalyst compositions comprising an organometal compound which is an amido complex of formula  $\text{R}_u\text{-Me-X}_v\text{-(NR}'^1\text{R}^2)_w$  where  $u+v+w=3$  when  $\text{Me}=\text{Al}$ . According to the examples on page 10, line 20 to page 14, line 26, only compounds with at most one amido group are effectively prepared and only halogen containing compounds where  $w=0,5$  were used in polymerisation processes. The subject-matter of claim 1 differs from D2 in that the Group13 metal compound c) needs to comprise two amido groups.

The subject-matter of claim 1 is therefore new (Article 33(2) PCT). Claims 2-5 depending on claim 1 are also novel.

The subject-matter of claims 6-8 being a polymerisation process in the presence of catalyst composition according to claim 1, it is novel also.

2. There is no comparative example in the present application showing an effect of the components c) over the metal amido compounds used in D1 or D2.

**INTERNATIONAL PRELIMINARY  
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The objective technical problem is therefore to provide for a catalyst composition comprising an alternative amido compound.

Although the case where  $u=1$ ,  $v=0$  and  $w=3$  are not expressively disclosed in D2, it is merely one of several straightforward possibilities from which the skilled person would select, in accordance with circumstances, without the exercise of inventive skill, in order to solve the problem posed and arrive at present solution.

The subject-matter of claim 1 is therefore not inventive.

The additional features present in claims 4, 6-8 can be found in D2.  
The subject-matter thereof is therefore not inventive neither.

3. The subject-matter of claims 2, 3 and 5 appears to be novel and inventive over the prior art. None of the cited documents would lead the skilled person to modify the catalyst compositions according to D1 or D2 in order to arrive at the solutions according to claims 2, 3 or 5 without involving an inventive activity.